



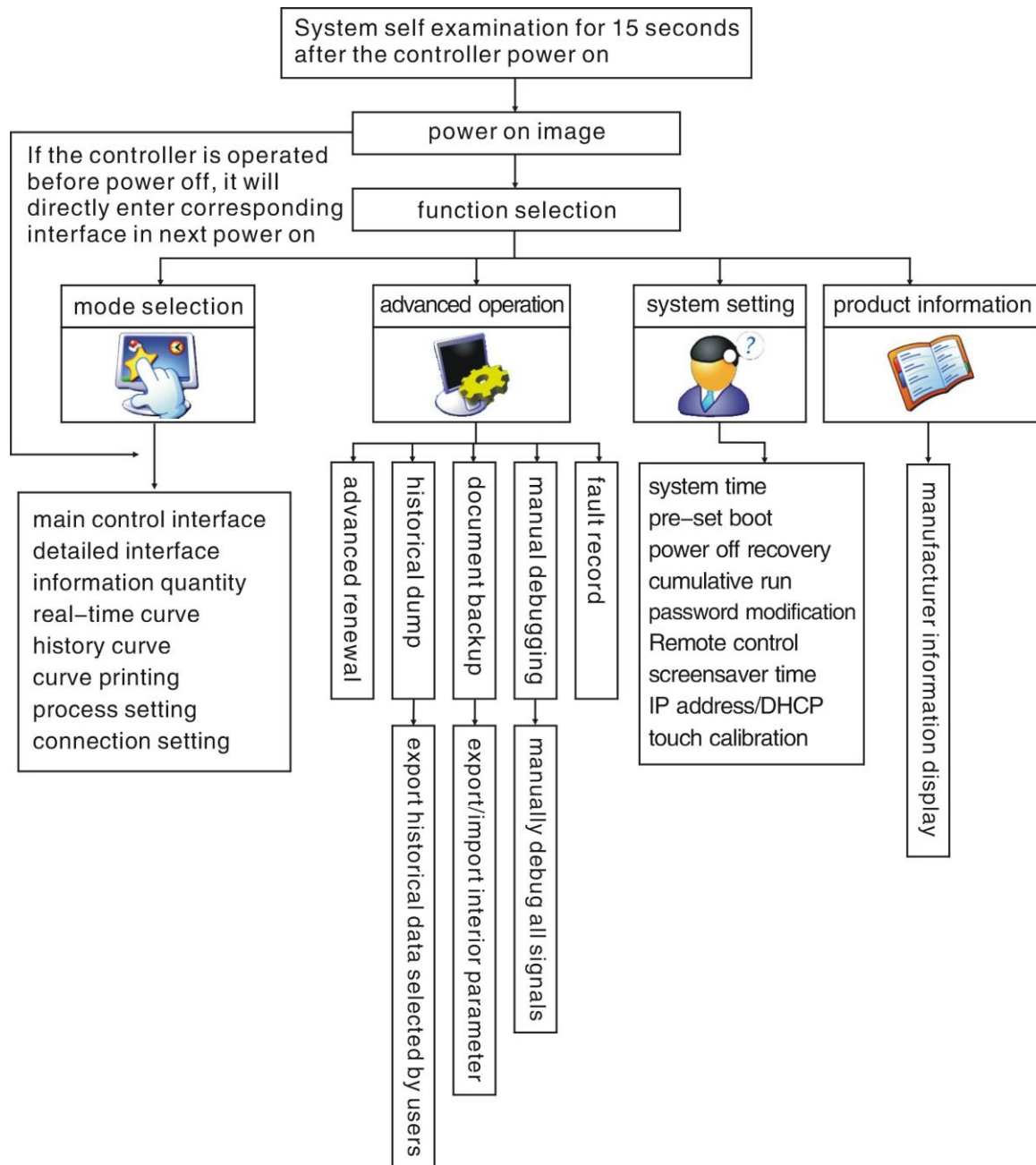
**UMC1500 Series
Salt Spray Test Chamber Program
Controllers
(V 2.0)**

User's Manual

Contents

I. Controller's Window Flow Chart	2
II. Detailed Functions Introduction	3
1. Initial Interface	4
2. Salt spray Control	4
3. Real-time curve	9
4. History Curve	11
III. Advanced Operation	13
1. Historical Dump	14
2. Document Backup	16
3. Manual Debugging	17
4. Fault Record	19
IV. System Setting	20
1. Time Setting	22
2. Pre-set Boot	22
3. Power Failure Recovery	23
4. Cumulative Run	23
5. Modification of User Privilege Password	23
6. Screensaver Time	24
7. IP Address Settings, DHCP Function	24
8. Touch Calibration	24
V. Product Information	25
VI. UMC1500_User Host Software	25
1. Software Functions	25
2. Communication Settings	25
3. Software Installation	26
4. Software Login	30
5. Communication Connection	31
6. Use the Host Software to Export Files from the Controller	32
7. Examples of History Playback	32
8. Use the Host Software to Play back Historical Data	33
9. Use the Host Software to Conduct Remote Control	34
10. Description of File Types Involved in the Operation of Host Software	35
VII. Ethernet Connection	35

I. Controller's Window Flow Chart

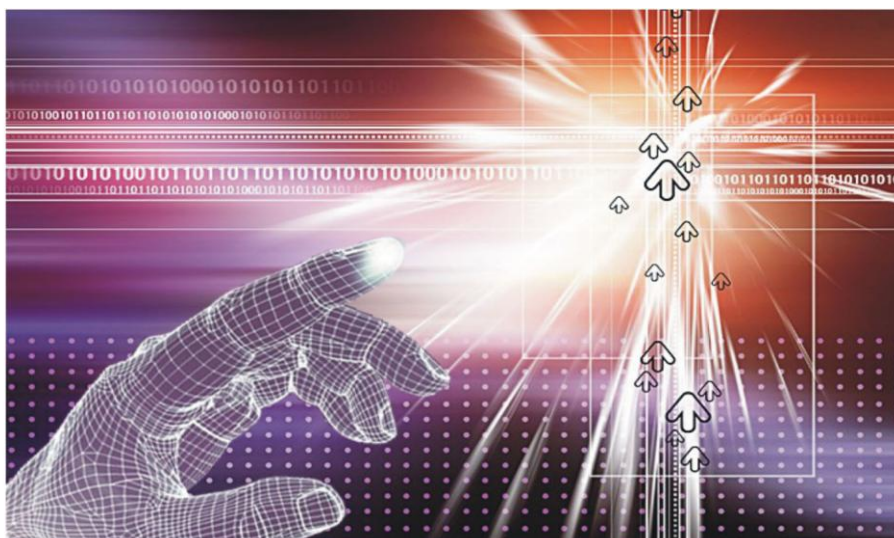


Item	Name	Description
①	Control interface	Program control and fixed-value control selection
②	Advanced operation	Include advanced renewal/ history dump/document backup/manual debugging/ faults record/time limit setting
③	System setup	Include system parameter setting, and inner parameter setting, etc.
④	Product information	Display manufacturer information (can be set by the manufacturer itself)
⑤	Company name/product model	Manufacturer name and product model (can be set by the manufacturer itself)
⑥	Product version number	Display version number
⑦	System time	Display current system time

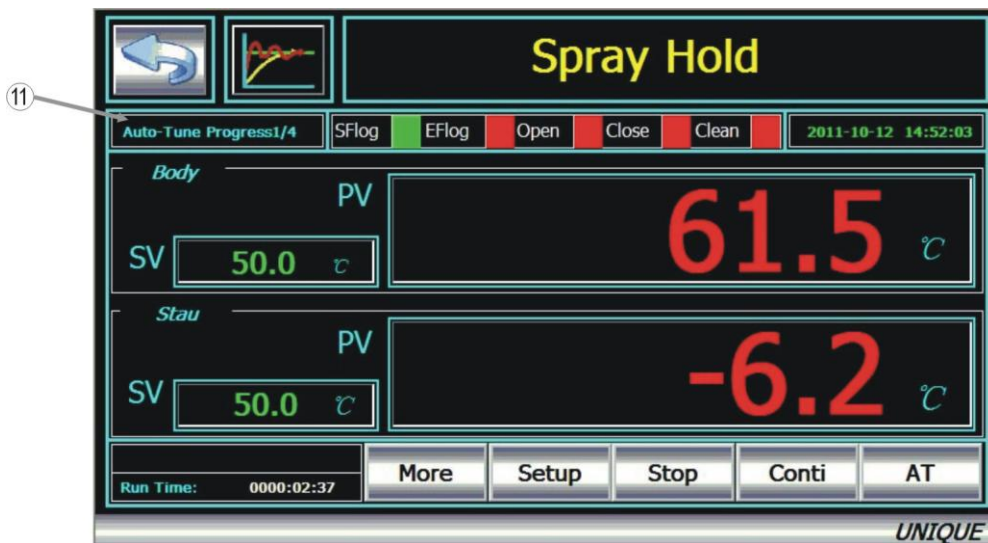
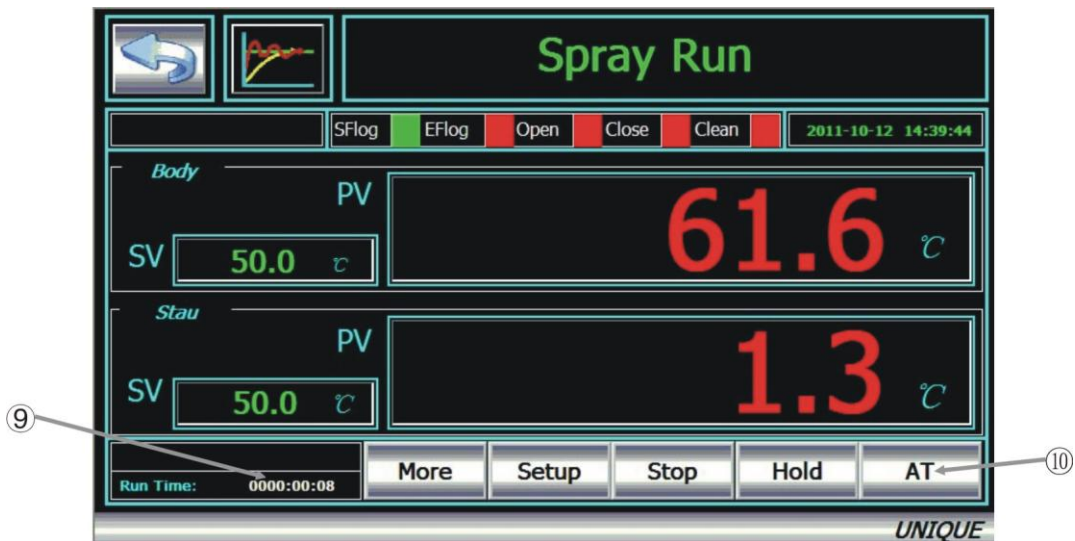
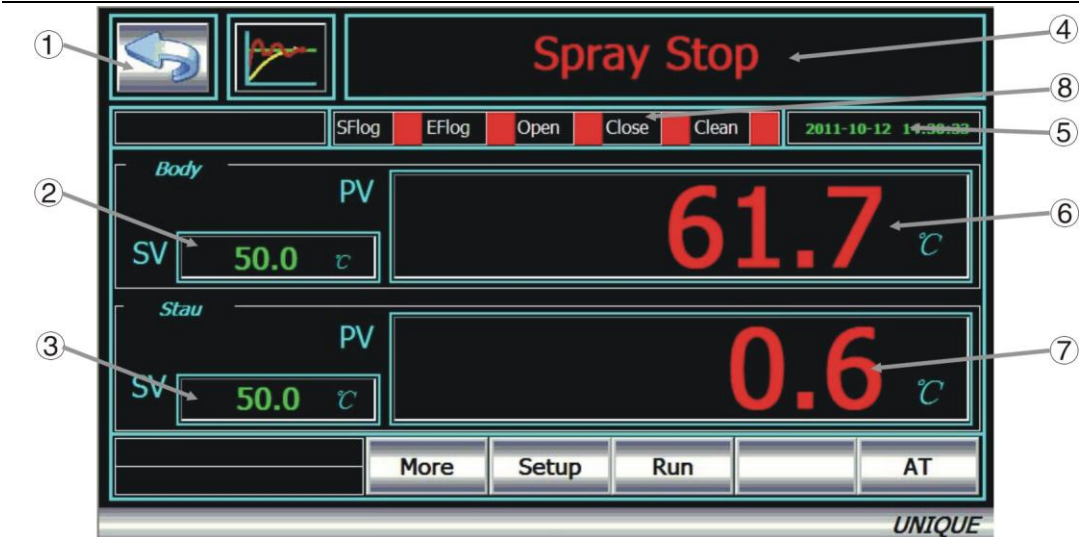
II. Function introduction

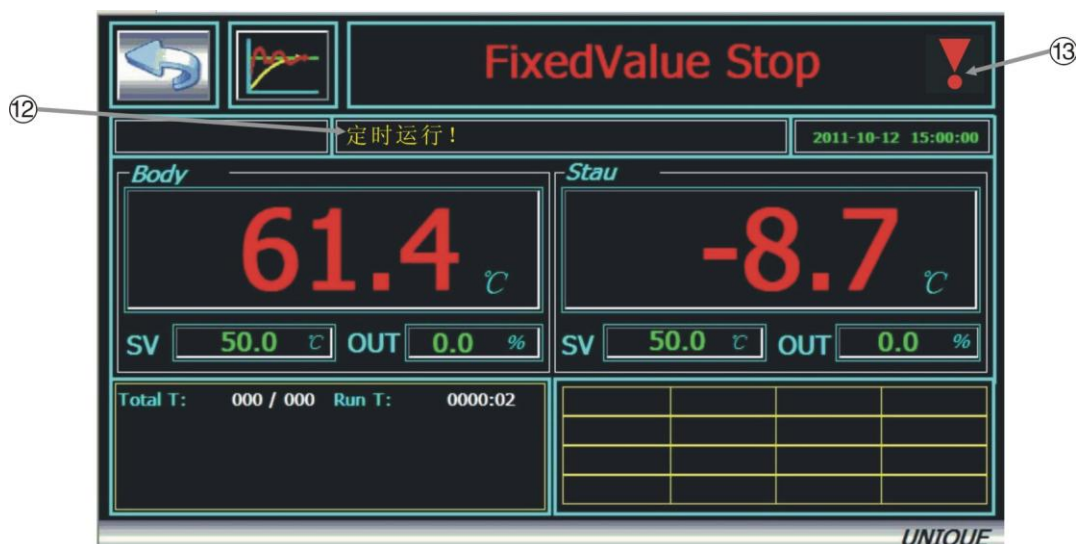
1. Initial Interface

After being electrified for the first time and self examination of 15 seconds, the instrument will change from the initial interface to system function selection interface.



2. Salt spray Control





Item	Name	Description
①	Return button	Return to the menu of previous step
②	Cabinet temperature SV value	Display current cabinet temperature set value
③	Saturator temperature SV value	Display current saturator temperature set value
④	Operation status	Display current fixed value operation status
⑤	System time	Display current system time
⑥	Cabinet temperature PV value	Display current cabinet temperature measured value
⑦	Saturator temperature PV value	Display current cabinet temperature measured value
⑧	Salt-fog control status	Display current salt-fog control switch status
⑨	Run time	Display current run time
⑩	Self-tuning function button	Go to the operation interface for self-tuning
⑪	Self-tuning indication	Display self-tuning status
⑫	Reservation indicator	Awaiting the system's reservation to power on
⑬	Alarm indicator	When the system has a fault, it will alarm with a flashing indicator. Click to check more.

Introduction to operation function of main control interface:

- 1) Operation: Start operation.
- 2) Stop: End operation
- 3) Maintain: Pause slope and timing status
- 4) Continue: Recover operation and timing for operations which shall be maintained.
- 5) Cancel: Related to setup of reservation operation and canceling reservation operation
- 6) Detail: Go to detailed operation interface.
- 7) Setup: Go to interface for operation parameter setting.
- 8) AT: Go to self tuning interface

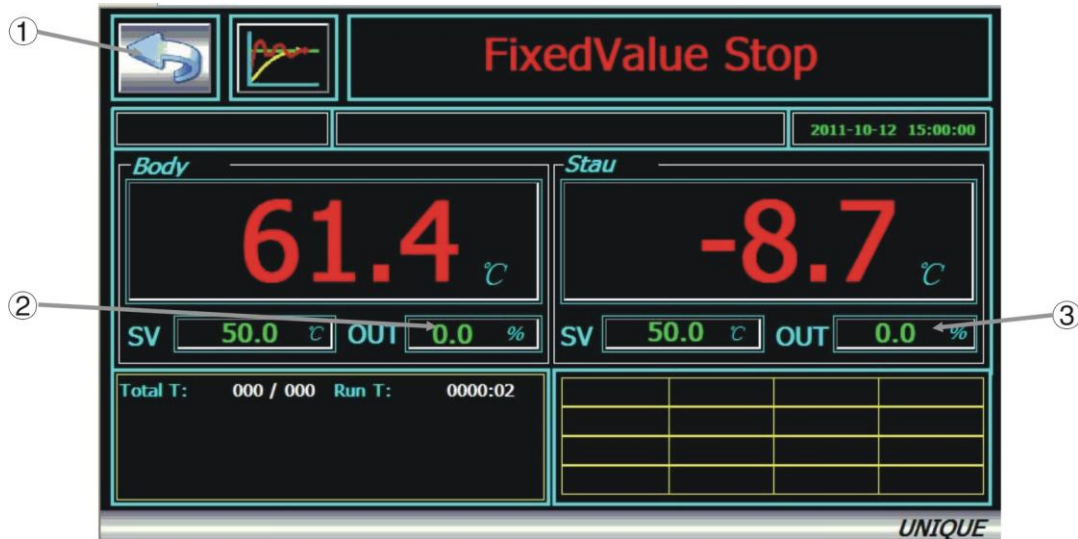
Detailed interface of fixed-value control information:

Clicking “detail” key in fixed-value main control interface will lead to detailed interface of fixed-value control information, in which users can check relevant information of the system in detail. It is very helpful for observing the working condition of the system.

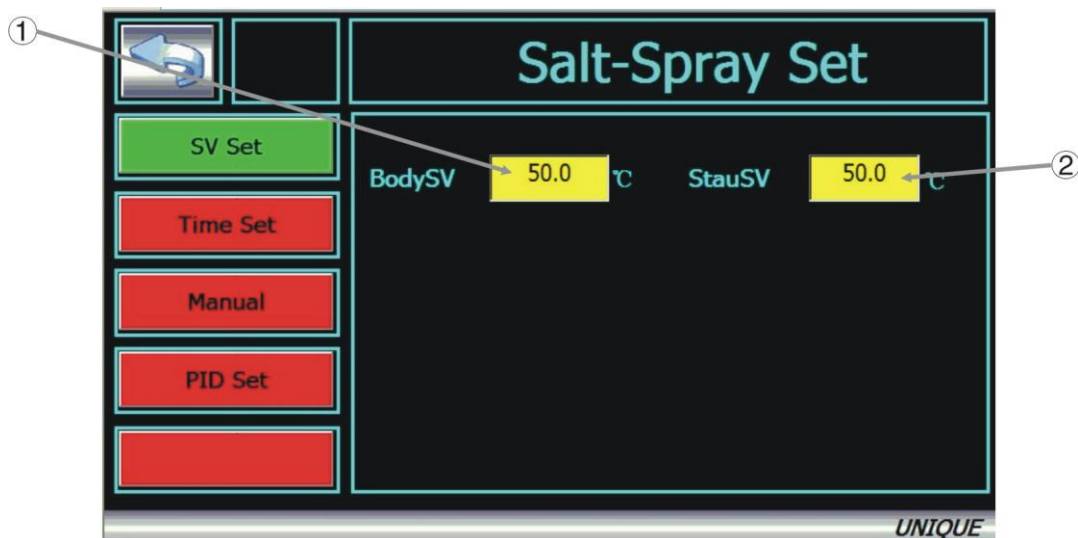
Interface of setting parameter of fixed-value control:

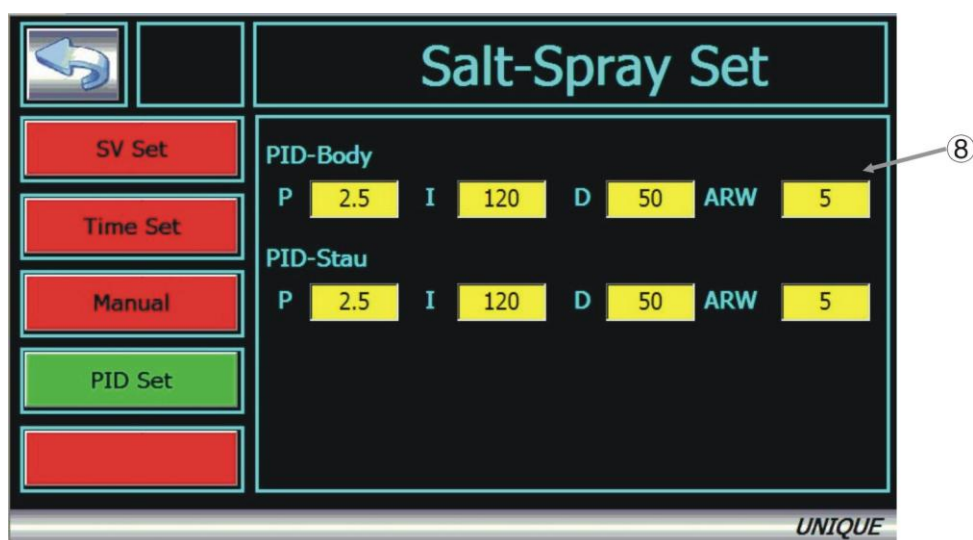
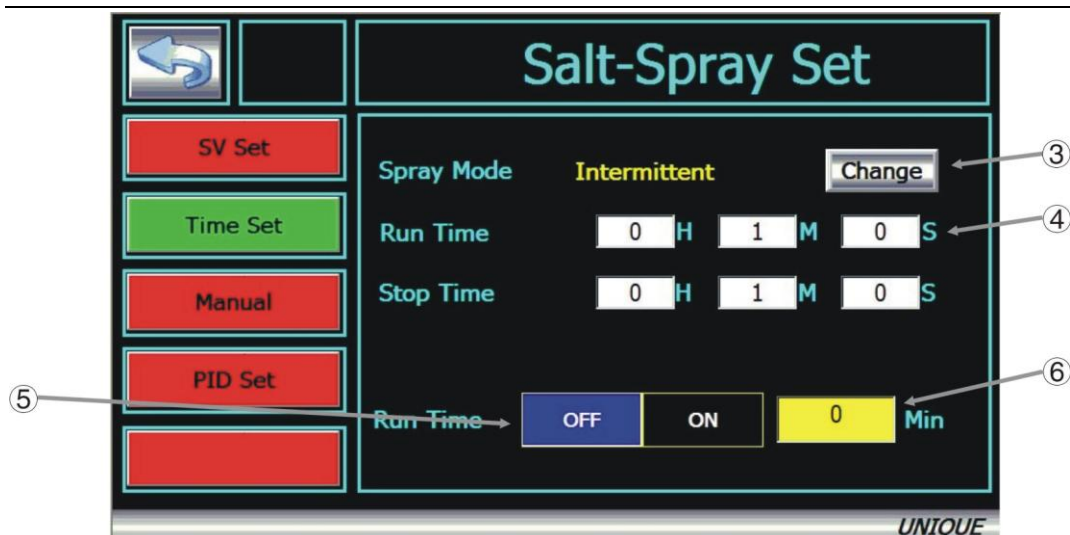
Clicking “setting” in fixed-value main control interface will lead to the interface of setting parameter of fixed-value control, in which users can set relevant parameters of fixed-value operation of corresponding system.

Clicking A and B area successively in the detailed fixed-value interface. The customer login window will appear. Select customer, and confirm password, then directly enter “input correction” interface.

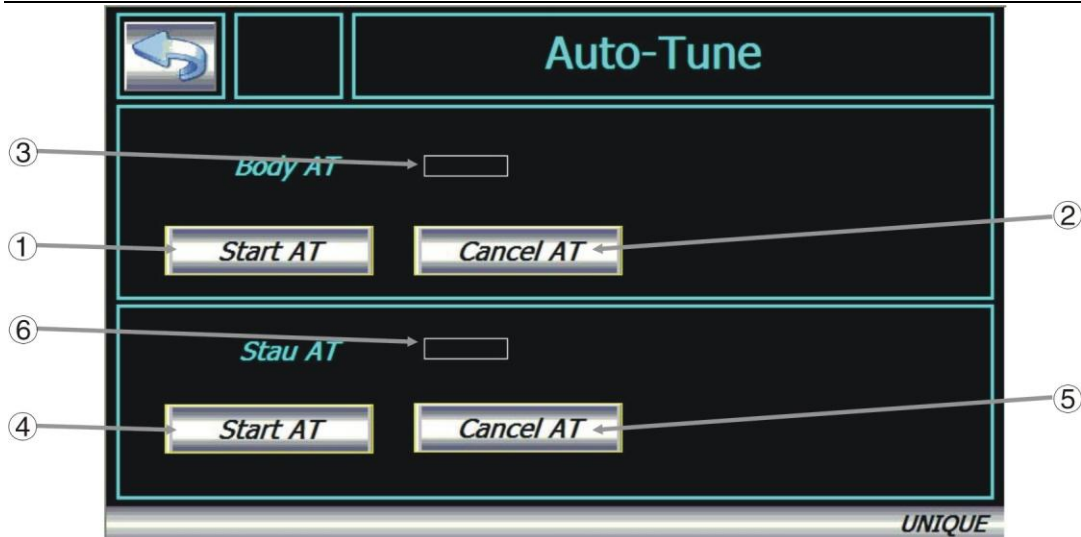


Item	Name	Description
①	Return button	Click this button to return to fixed value main control interface
②	Temperature OUT%	Display current temperature output percent
③	Humidity OUT%	Display current humidity output percent





Item	Name	Description
①	Cabinet temperature setup	Set cabinet temperature target SV value
②	Saturator temperature setup	Set saturator temperature target SV value
③	Spray mode selection button	Switch the spray mode between continuous mode and intermittent mode
④	Time setting for intermittent mode	Set the operating time and stop time of intermittent mode
⑤	Time switch for fixed time	Select to open or close fixed time operation
⑥	Fixed time setting	Set the time for fixed time operation
⑦	Manual switch	Manually control the spray, eject, open, close actions.
⑧	PID setting	Set the PID values of the cabinet and the saturator



Item	Name	Description
①	Select cabinet temperature self-tuning	Click it for cabinet temperature self tuning
②	Cancel cabinet temperature self-tuning	Click it to cancel cabinet temperature self tuning
③	Cabinet temperature self-tuning status	Red means the cabinet temperature is self tuning, and black means the cabinet temperature is not self tuning.
④	Select saturator temperature self-tuning	Click it for saturator self tuning
⑤	Cancel saturator temperature self-tuning	Click it to cancel saturator temperature self tuning
⑥	Saturator temperature self-tuning status	Red means the saturator temperature is self tuning, and black means the saturator temperature is not self tuning.

Temperature self tuning interface:

Click “AT” key in fixed-value main control interface to enter temperature self tuning interface. Users are free to choose self tuning on or off.

Self tuning can only be carried out in starting up status of fixed-value operation. After the start of self tuning, fixed-value operation will automatically enter maintaining status, and the upper right will show red “TAT”. After self tuning completes, the system will automatically end maintaining status and enter operation status. Relevant PID parameters after self tuning will be automatically recorded in the PID area of the system when self tuning starts. Self tuning function is mainly used in equipment adjustment stage. It is recommended that advanced users’ authority should be set on it after the completion, in order to avoid loss of PID parameters due to wrong operation. If you set users’ access privilege to “AT”, Click the button and a logging in window

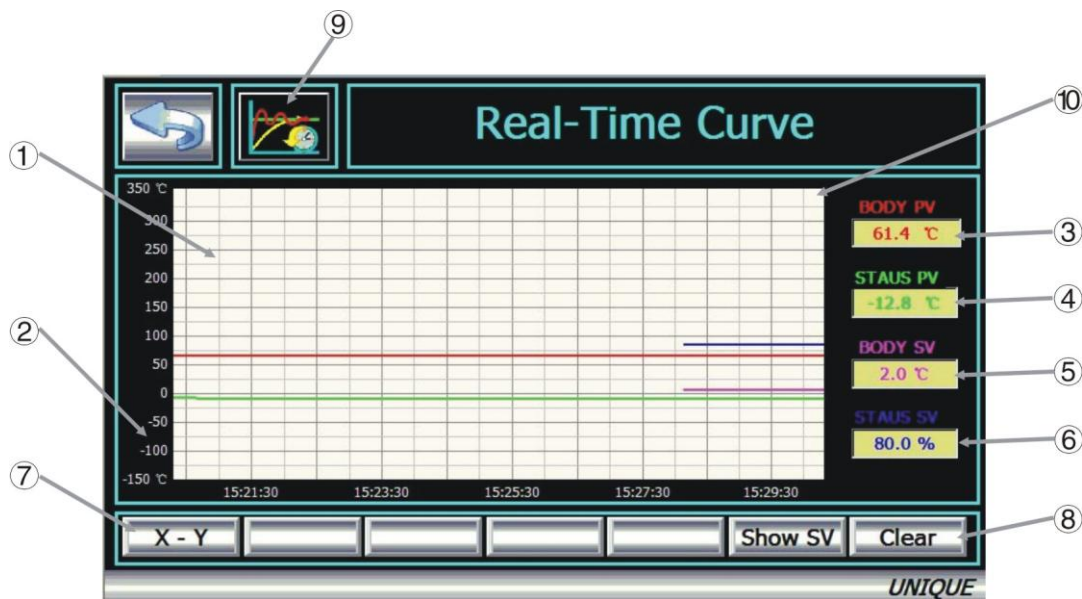


will pop up. You can have access to temperature self tuning interface only after choosing users' grade meeting authority's requirement and inputting right password.

Operation status	Reminding content
Select self tuning in standby status	"The system is not operated!"
Click "continue" or "stop" during the tuning	"The system is self tuning!"

3. Real-time Curve

In the control interface, clicking  icon will lead to real-time curve interface.

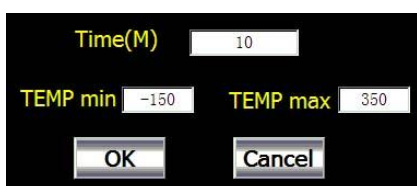


Item	Name	Description
①	Curve display area	Real-time curve is displayed in this area
②	Temperature coordinate display	Display temperature coordinate value
③	Cabinet PV value	Display current cabinet real measured value
④	Saturator PV value	Display current saturator real measured value
⑤	Cabinet SV value	Display cabinet set value
⑥	Saturator SV value	Display saturator set value
⑦	Coordinate revision	Click it to set temperature and humidity coordinates
⑧	Curve cleaning button	Click it to clean real-time curve in the area and draw it again
⑨	History curve	Click it to go to history curve interface
⑩	Humidity coordinate display	Display humidity coordinate value

The interface will meet users' needs to browse the curve of real-time data. Continuous real-time record of the curve changes of the humidity in recent time will help users observe the changes of humidity, analyze the trend of the curve changes and find out the data change rule, so as to prevent accidents. In the curve display area, humidity PV curve will be shown in red line, cabinet temperature SV curve will be shown in blue line, saturator humidity PV curve will be shown in green line, saturator temperature SV curve will be show in dark yellow line.

Real-time curve interface includes the following items:

- 1) Coordinate setup: Click the button and the coordinate setup dialog box will pop up. Change the size of curve display area by changing the length of coordinate axis, which will help users observe the curve well. In this window, users can set history curve's maximum value "Y max" and minimum value "Ymin" of Y axis as well as the time length of X axis. The setup will be done after clicking "revision complete" button. The time setting range is 10~90 minutes.



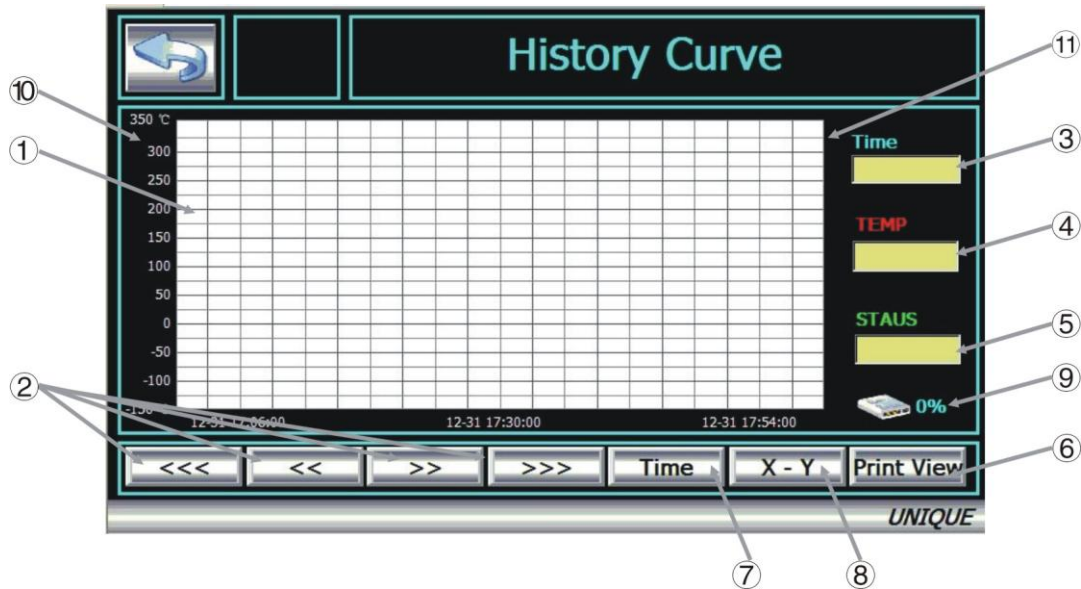
- 2) Clean and redraw it: Clicking the button will clean the displayed curve in curve display area. The curve will be redrawn from current moment.
- 3) SV display: Clicking the button will shift display and concealing of humidity SV real-time curve in curve display area.

! Attention

When you set, "Ymin" is not allowed to exceed "Ymax".

4. History Curve

In real-time curve interface, clicking  icon will go to history curve interface. Clicking return key will return to real-time curve.



Item	Name	Description
①	Curve display area	History curve displays in this area
②	FWD and REV button	Click it to realize forward and backward function
③	Current point time	Display the time of currently chosen historical point
④	Current point cabinet value	Display the cabinet value of currently chosen historical point
⑤	Current point saturator value	Display the saturator value of currently chosen historical point
⑥	Print preview button	Click it to go to print window
⑦	Curve inquiry button	Click it to set the start time of historical data
⑧	Coordinate revision button	Click it to set coordinate and time of humidity
⑨	Used storage space	Display currently used storage space proportion
⑩	Temperature coordinate display	Display temperature coordinate value
⑪	Humidity coordinate display	Display humidity coordinate value

This interface can help users to have an overview of the historical data curve, helping them to check the historical data of equipment operation in the past. UMC1500 has the function of storing historical data, which will not disappear in case of power failure. When the system is in operation, it is able to make trend effect drawing of corresponding historical data according to requirements, which makes it easier to check data and variation trend status later on.

History curve interface includes the following items:

- 1) Cursor: Cursor, a line in curve area, moves with the mouse's move. In the information display window on the right, it shows the time the cursor directs and temperature value at the moment.



2) Operation button: Operation button includes basic operation of historical trend curve.

<<<: One page up

>>>: One page down

<<: One main line time up, curve display up by a small margin

>>: One main line time down, curve display down by a small margin

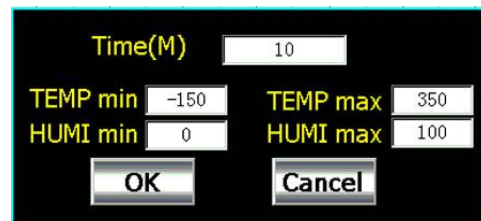
3) Curve inquiry: Click the button and curve inquiry dialog box will pop up.

As shown in the image, while setting curve inquiry, users can input the start time of the data to be observed according to your needs. You can choose from the following items:

1) Saved data in recent X hours: by setting the time length, you can get the curve in recent certain period, usually one hour.

2) Set start time: Save the data at set time by setting start time of X axis. Users can skip to required time by using this option. The set time should not be later than current time.

Note: if the start time is set too early, the controller's speed may be affected because too much historical data may lead to long data loading time. So if users need to inquire historical data and curve in earlier period, it is suggested that you use UMC1000 (User) upper software to operate.



3) Coordinate setting: Click the button and coordinate setting dialog box will pop up. Changing the size of curve display area by changing the length of coordinate axis will help users observe the curve well. In this window, users can set maximum "Ymax" and minimum "Ymin" of Y axis of History curve as well as time length of X axis. The setting will be completed after pressing "revision complete" button. The time setting range is 1~10 hours, and "Ymin" cannot be larger than "Ymax".

4) Clicking "print preview" button of History curve interface will lead to printing interface



Item	Name	Description
①	Return (invisible key)	Press this area to return to History curve interface
②	Print (invisible key)	Press this area to print the curve
③	Print information	Display curve print information
④	Operator	Input operator name
⑤	Remarks	Input relevant remark information

III. Advanced

After clicking advanced operation button in function selection interface, you will enter advanced operation function selection interface. Advanced operation includes advanced renewal, historical dump, document backup, manual debugging and fault record.



Item	Name	Description
①	Historical dump	Dump historical data of required temperature
②	Manual debugging	Manually debug input and output signals and analog output signals
③	Document backup	Make a document backup copy of interior parameters and process connection setup of the system
④	Fault record	Record of historical faults
⑤	Advanced renewal	Insert a U disk with renewed document. Click this key to go to advanced renewal interface. Restart the system after confirmation and the system will enter renewed version.

1. Historical Dump

In order to help users to dump the historical data of the humidity in required time scope,

UMC1500 system collocates a historical data storage function with the longest time of 600 days(24 hours operation status/ record interval : one minute). Users can check the historical data of last 600 days through historical data playback function. After exceeding 600 days, the earliest data will be automatically cleaned by the system, so as to always maintain the recent historical data of 600 days.

In order to avoid data loss, users can dump earlier historical data from UMC1500 through removable storage equipment such as U disk and portable hard disk. Besides, you can also use relevant upper data playback software to transfer the data to general use data-base format (ACCESS) and save it to the computer, so as to store the data permanently.



Item	Name	Description
①	Export button	Confirm the start of historical data export
②	Start time	Set the start time of exporting historical data
③	End time	Set the end time of exporting historical data
④	USB status	Display the USB device connecting status of current system

After entering historical dump interface, if the system can identify the portable storage equipment, the setting area of start time and end time will automatically show. After setting the start time and end time of historical data in required time scope, the system will automatically enter historical data dump process as long as you click “export” key. During the dump process, a progress bar will appear in the interface to display the dump progress. After the data dump completes, an information box will pop up to remind you “export complete!” A new file named by the exported time will be added to the root directory of the USB device, and it includes the historical data document with the postfix name of *.h12.

! Attention	
◆	As the historical data documents of the system increases, the data dump time will become relatively longer. A progress bar will display current dump progress after the start of dump process. Please be patient waiting until the relevant information box pops up.

Dump start/end time setting scope:

Year	Month	Day	Hour	Minute
2000~2035	1~12	1~31	0~23	0~59

Other possible reminders which may appear during the operation:

Operation status	Reminding content
After going into historical dump interface, if the USB device is not inserted or identified by the system	Please insert portable storage equipment and operate again!
Choose to click export operation while the USB device is not inserted or identified by the system	Please insert portable storage equipment and operate again!
End time is later than system time	End time is later than current system time!
End time is earlier than start time	Start time cannot be later than end time!
Export operation fails	Invalid target path!
	Document cannot be created in target path(an operation which is only executed without USB device/read-only)
	No historical data document!
	Something wrong with creating document in target path!
	No data document suitable for the time scope(no data in the start and end time scope)

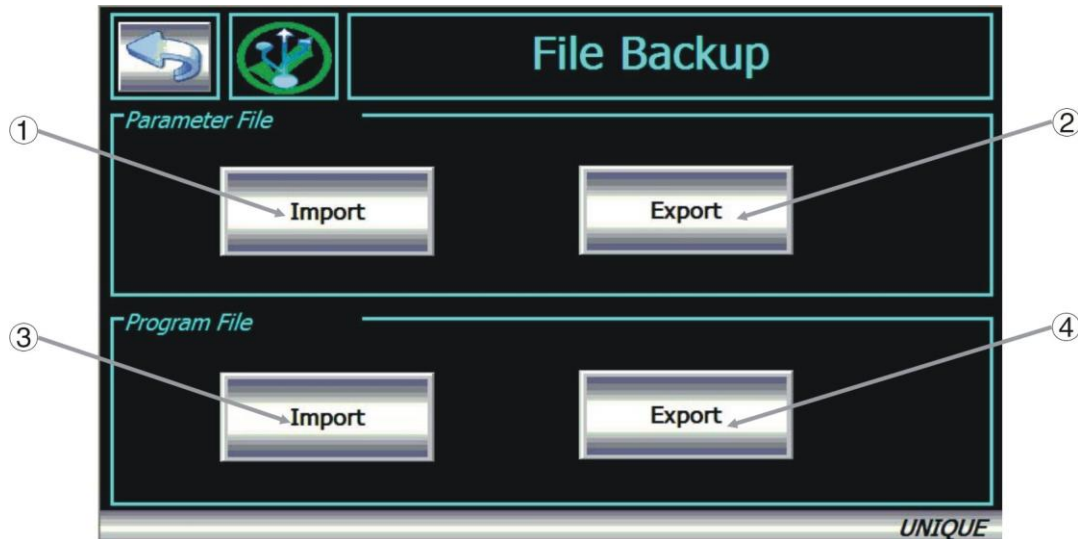
Historical data of USB dump cannot be opened in upper computer. You need to use UMC1000_User software to transform the format and playback. After transformation, the document

format will be changed to *.his12.

Users can transform it to ACCESS data-base document based on different needs.

2. Document Backup

Backup system inner parameter documents.



Item	Name	Description
①	Parameter import	Confirm to start parameter document import process
②	Parameter export	Confirm to start parameter document export process
③	Process import	Confirm to start process document import process
④	Process export	Confirm to start process export process

Document backup can help users to backup and dump useful parameter documents. After the system identifies the portable storage equipment, you can choose to execute “export” or “import” operation.

At any time users can execute relevant operation to UMC1500 through portable storage equipment such as U disk, portable hard disk, dumping the system parameters to portable storage equipment in document format and save them to the computer, so as to realize parameters backup. Besides, it is also possible to set up relevant documents in UMC1500 through importing operation.

Export: display “export completes” on success and “export fails” on failure.

Import: display “import completes” on success and “import fails” on failure.

After dump completes, a “Paramdata.d12” document will be added to USB device root directory, namely the parameter document. When there are many process or parameter documents under the root directory of U disk, a selection list will pop up before importing.

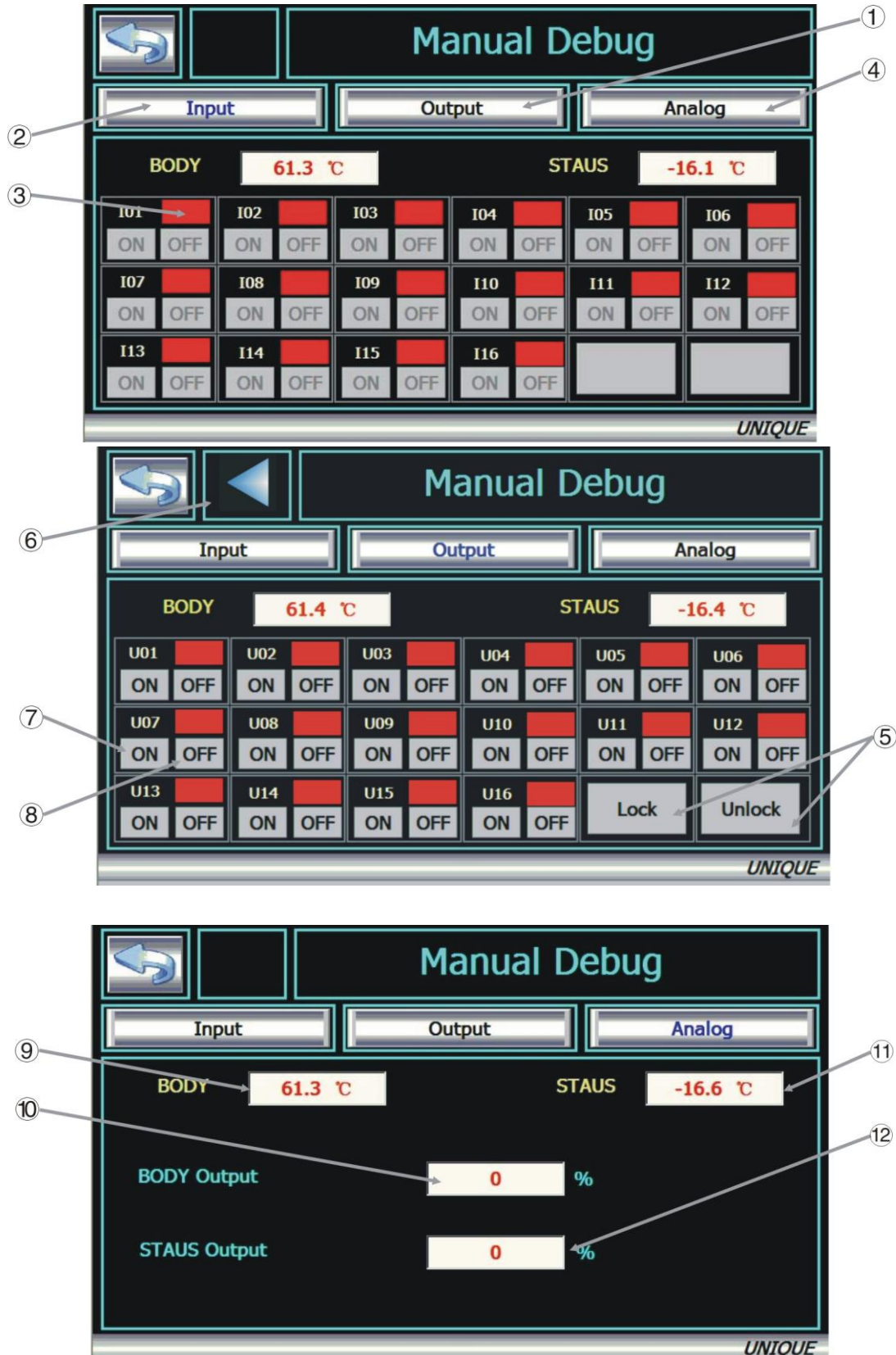
Other possible reminders which may appear during the operation:

Operation status	Reminding content
After going into data operation interface, if USB device is not inserted or identified by the system	“Please insert portable storage equipment and operate again!”
Choose to click export or import operation while the USB device is not inserted or identified by the system	“Please insert portable storage equipment and operate again!”

Process backup: UMC1500 version does not support process operations.

3. Manual Debugging

While debugging the equipment before using it, manually debugging switch output signals, input signals and analog output of the system is very helpful for users to know whether current system output and input signals are correct or the power distribution of the equipment is reasonable.



Item	Name	Description
①	Switch output	Click it to enter switch output debugging status
②	Switch input	Click it to enter switch input debugging status
③	Input indicator	16 input indicators, green means input satisfaction
④	Analog output	Click it to enter analog output debugging status
⑤	Locked/ unlocked	Click it to lock/unlock
⑥	Button for turning pages	While using extension DCU selection, click it for DCU switching
⑦	ON key	Force current point output
⑧	OFF key	Force current point to turn off
⑨	Cabinet temperature	Current cabinet temperate PV value
⑩	Temperature output%	Manually set cabinet temperature output power, 0~100%
⑪	Current humidity	Current saturator temperature PV value

After choosing to click “manual debugging”, you will enter manual input operation interface, in which you can debug input signal manually or choose “switch output part” and “analog output part” to shift to switch output signal manual debugging interface or analog output signal manual debugging interface.

Besides switch status display, in manual debugging interface there is also current temperature display of the system, which will help users to know more about current system's condition.

- 1) Input signals: Use status bar reflects corresponding status of current switch input signals. When there is no signal input, the signal indicator is red, and when there is signal input, the indicator is green.
- 2) Output signals: In order to avoid wrong operation, “lock” and “unlock” function keys (the system default as locked) are added in manual output interface and manual output operation can be executed only in “unlocked” status. ON/OFF operations correspond with their output signal switches, ON means to force current point to export, and OFF means to force current point to turn off. The applied value reflects corresponding status of current switch input signals. No point output is shown as red and point output value is displayed as green 1.
- 3) Analog output signals: Users can set corresponding output percent in temperature output percent, and manually debug the heater. For example, set it to be 30%, heater's power 1000W, and then the output will be 300W.

! Attention	Wrong operation may hurt users or damage stuff.
◆	In manual debugging interface 101~I16 corresponds with DCU1000 module's input point 101~I16, U01~I16 corresponds with DCU1000 module's input point U01~U16. Temperature output percentage corresponds with ACU1000 module's OUT1 output status, humidity output percentage corresponds with ACU1000 module's OUT2 output status.

4. Fault Record

Click “fault record” key in advanced operation interface and the system will enter historical alarm record interface, in which users can check recent fault matters. Pressing clear key can clear all fault

records.

Displayed fault information includes the following content:

Happening time: the happening time of the alarm accident;

Releasing time: the releasing time of the alarm accident;

Fault accident: fault name generating alarm

Fault act: the fault means that the alarm happens/ releasing means that alarm ends

Failure History			
NO	Time	Type	Event
1	2011-10-12 13:46:46	Failure	ACU Disconnected
2	2011-10-12 13:46:46	Failure	DCU Disconnected
3	2011-10-12 14:38:01	OK	DCU Connected
4	2011-10-12 14:38:02	OK	ACU Connected
5	2011-10-12 14:56:21	Failure	ACU Disconnected
6	2011-10-12 14:56:21	Failure	DCU Disconnected
7	2011-10-12 14:56:30	OK	DCU Connected
8	2011-10-12 14:56:31	OK	ACU Connected
9	2011-10-12 14:56:43	Failure	DCU Disconnected
10	2011-10-12 14:56:49	OK	DCU Connected

Clearing operation of historical alarm record: Click clear key and return from historical alarm record interface, and the records will be cleared

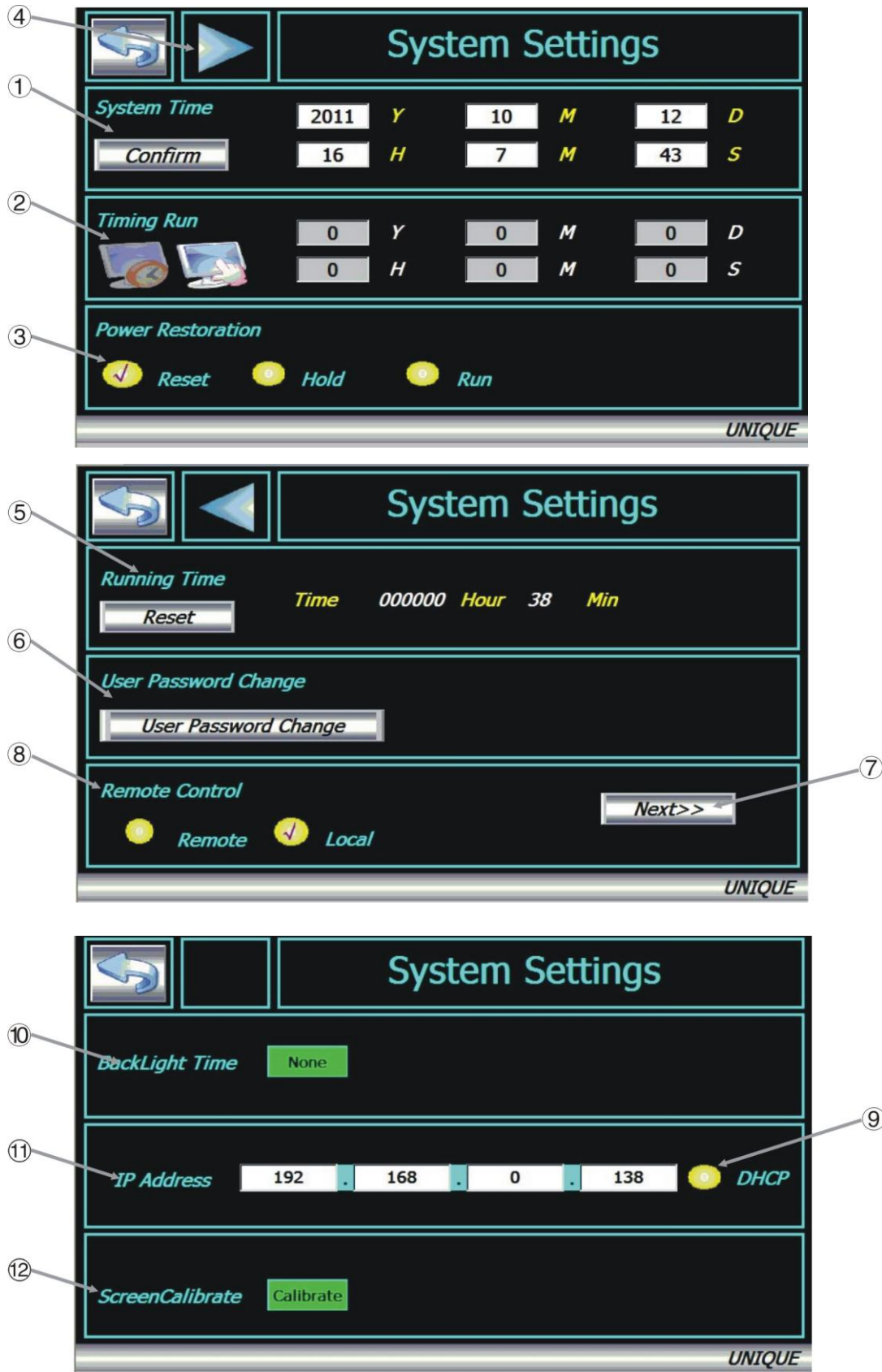
! Attention

- ◆ Historical alarm window can only record 16 faults of fault setup of corresponding interior window, including module communication fault and temperature sensor disconnection fault.

IV System Setting

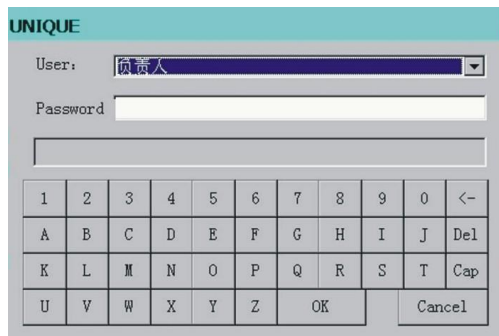
Click the System Setting button on the function selection interface to enter the System Setting function selection interface. System settings include nine sections: system time, pre-set boot, power failure recovery, remote operation, cumulative run time, password change, Screensavers time, IP address (DHCP) and touch calibration.

Note: After setting the parameters in the input boxes, you need to exit the interface to activate all set parameters.



Item	Name	Description
①	System Time	Set up the current system time
②	Pre-set Boot	Set up the pre-set boot status and corresponding time

③	Power Failure Recovery	Select Reset/Cold Boot/Warm Boot
④	Page Up/Down	Switch to system setting 2
⑤	Cumulative Run	Calculation of the total time from the initial use to the current working time
⑥	Password Modification	Modify the password as per the user's requirement
⑦	Next	Enter system setting 3 through the user logon window
⑧	Remote Control	Select remote or local control
⑨	DHCP	Automatically obtain IP address
⑩	Screensaver Time	Select settings of screensaver time
⑪	IP Address	Set up the IP address
⑫	Touch Calibration	Select calibration to calibrate the screen



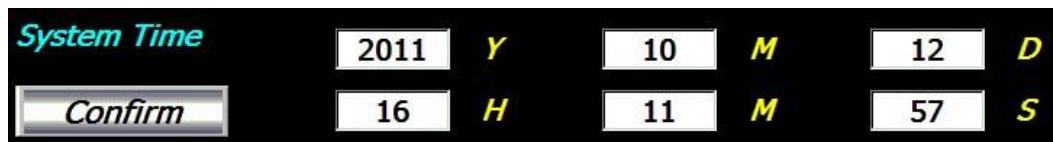
The image shows a user login interface for the UNIQUE system. It includes a 'User:' dropdown menu with '管理员' (Administrator) selected, a 'Password' input field, and a numeric keypad with letters A-Z, OK, and Cancel buttons.

DHCP Function Tips:

This is the function to automatically obtain IP address and should not be used without connection between the controller and the router. If the controller is not connected with a router, please do not use this function and please manually allocate the IP address.

1. Time Setting

This function can amend the current system time. Setting items: year, month, day, hour, minute, second, click “Enter” to finish the amendment. All historical data will be deleted after successful amendment of the system time.



The image shows the 'System Time' setting interface. It displays the current system time as 2011 Y, 10 M, 12 D. Below it, there is a 'Confirm' button and the time 16 H, 11 M, 57 S.

Scope of system time setting:

Year	Month	Day	Hour	Minute	Second
2000~2030	1~12	1~31	0~23	0~59	0~59

! Attention:

All historical data will be deleted if you modify the system time.

2. Pre-set Boot

Set the system's pre-set boot status and corresponding pre-set time. When the system time arrives the set time, the system will automatically run.



The image shows the 'Timing Run' setting interface. It displays the pre-set boot time as 2009 Y, 9 M, 21 D. Below it, there is a 'Timing Run' button and the time 13 H, 42 M, 0 S.



Press the corresponding icon to select the system pre-set boot status. The current status is indicated by the lit icon. When selecting the “Manual Boot”, the corresponding words of “Year, Month, Day, Hour, and Minute” will become pale and the pre-set time cannot be set up. When selecting the “Pre-set Boot”, the corresponding words of “Year, Month, Day, Hour, and Minute” will become white and the “Year, Month, Day, Hour, and Minute” can be set up. The setting scope is the same with the system time.

After the pre-set boot is selected, there will be the flashing indication of “Timed Run” in the main control interface and detailed information interface, the main program control interface and their respective interfaces of detailed information, with the “Cancel” button appearing below. You can press the button to cancel the current pre-set boot setting and switch back to the manual boot mode.

! Attention

- ◆ During the switch of the system setting interfaces, if the current system time exceeds the pre-set run time, an information prompt box showing “Start time earlier than the current system time” will pop up, which cannot leave the current window.
- ◆ The self-tuning function has no power failure memory, so the system needs to be rebooted manually.
- ◆ Users are advised not to power off the running system. Because during the running of the system, saving historical data is to perform write operation of FLASH, power failure may damage the system. It is strongly recommended to stop the running system before power off.

3. Power Failure Recovery

Cold boot: If rebooted after power failure under the operating status, the system indicates “maintained” and the operation can be continued.

Warm boot: if rebooted after power failure under the operating status, operation will continue from the current minute before power off.

Reset: system is in selection interface.

4. Cumulative Run

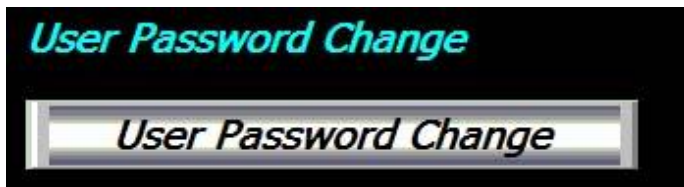
Summing up the working time from the initial use time to the current time for users to check the equipment's status for corresponding maintenance and repair



Indicating the total time from the first run to the end of the current run (excluding system standby time), including hour and minute (99999 hours 59 minutes at maximum) Click “Time Reset” and confirm the cumulative run time will be reset to 00000 hour 00 minute.

5. Modification of User Privilege Password

The user can modify the password of corresponding privilege level.




The image shows a dialog box titled "UNIQUE". It contains a "User:" dropdown menu with "管理员 [ADMIN]" selected. Below it is a "Password" input field. A message below the input field says "**请牢记密码! [Remember Your Password!]**". At the bottom is a numeric keypad with letters A-Z and function keys like "OK" and "Cancel".

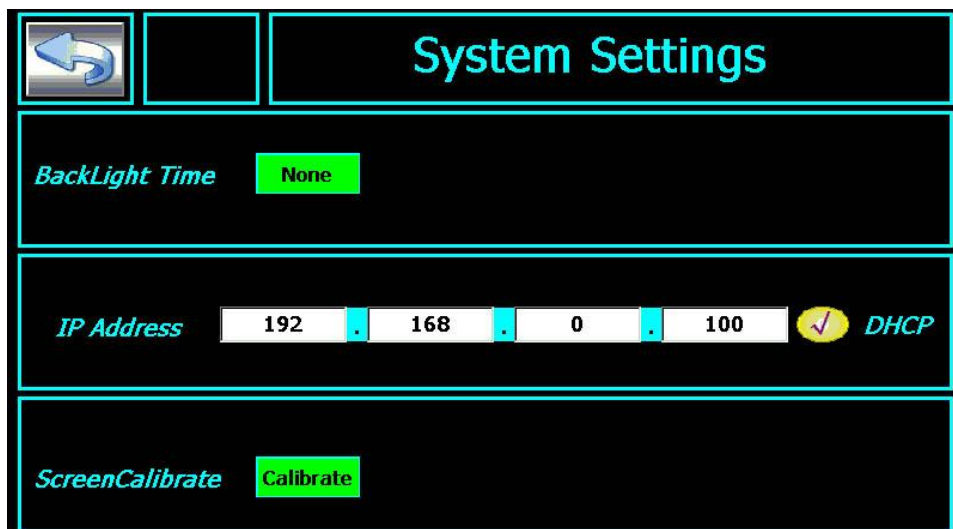
Setting method: press the "Password Modification" button, select the user privilege you want to modify in the pop-up login window and input correct password, then press Enter. If the password is correct, the interface will pop up the password modification window (if the password is incorrect, then the interface shows "the password is incorrect, please re-enter the password"). Input the old password, new password into the window and confirm the password, then press Enter to finish the modification of the password of corresponding privilege level.

6. Screensaver Time

Set up the Screensaver time of the controller. There are five options, none, 1 minute, 5 minutes, 15 minutes, and 30 minutes. After selection, the real-time setting of Screensaver time will be activated.

Please try to use Screensavers in order to extend the life of backlit LCD interface.

The Screensaver time and the interface calibration settings will be activated after completion of the settings. No reboot is needed.



The image shows a "System Settings" screen. It has a back arrow button in the top left. The settings are as follows:

- BackLight Time**: Set to **None** (highlighted in green).
- IP Address**: Set to **192 . 168 . 0 . 100** (highlighted in green). A yellow checkmark icon and the text **DHCP** are next to it.
- ScreenCalibrate**: Set to **Calibrate** (highlighted in green).

7. IP Address Settings, DHCP Function

IP address settings take effect only after exiting the interface. DHCP is the function to

automatically obtain IP address and must be used only when the controller is connected with the router. If not, please do not use this function and the IP addresses are manually assigned.

8. Touch Calibration

When the controller's touch is deflected, the controller can be calibrated.

V. Product Information

Click the Product Information button in the function selection interface to enter the production information viewing interface. The product information shown includes product model, product name, company name, company address, telephone, fax and company website.



Information	
P Mode	UMC1400
P Name	盐雾箱控制器
Company	UNIQUE
Address	
Phone	Fax
Website	

UNIQUE

VI. UMC1000_User Host Software

1. Software Functions:

The UMC1000_User user specific software can connect to UMC1500 controller to provide direct users for operation and use. Main functions are specified below:

- ◆ Real-time monitoring (monitor the real-time data, signal location status, actual output status)
- ◆ Watch list (monitor the running status of 1 to 16 controllers)
- ◆ History curve playback (play back the downloaded historical data curves within the controller)
- ◆ Program edit (edit program process and connection)
- ◆ Communication configuration (configure the IP address of the controller)
- ◆ FTP upload and download (historical data, process connection file, advanced updates)
- ◆ Real-time curve, printing
- ◆ Fault history view (view the fault state of the equipment)
- ◆ Remote fixed-value control (all settings of fixed-value running)
- ◆ Remote program control (all settings of program running)
- ◆ Setting of user logon privilege
- ◆ Multiple language selection

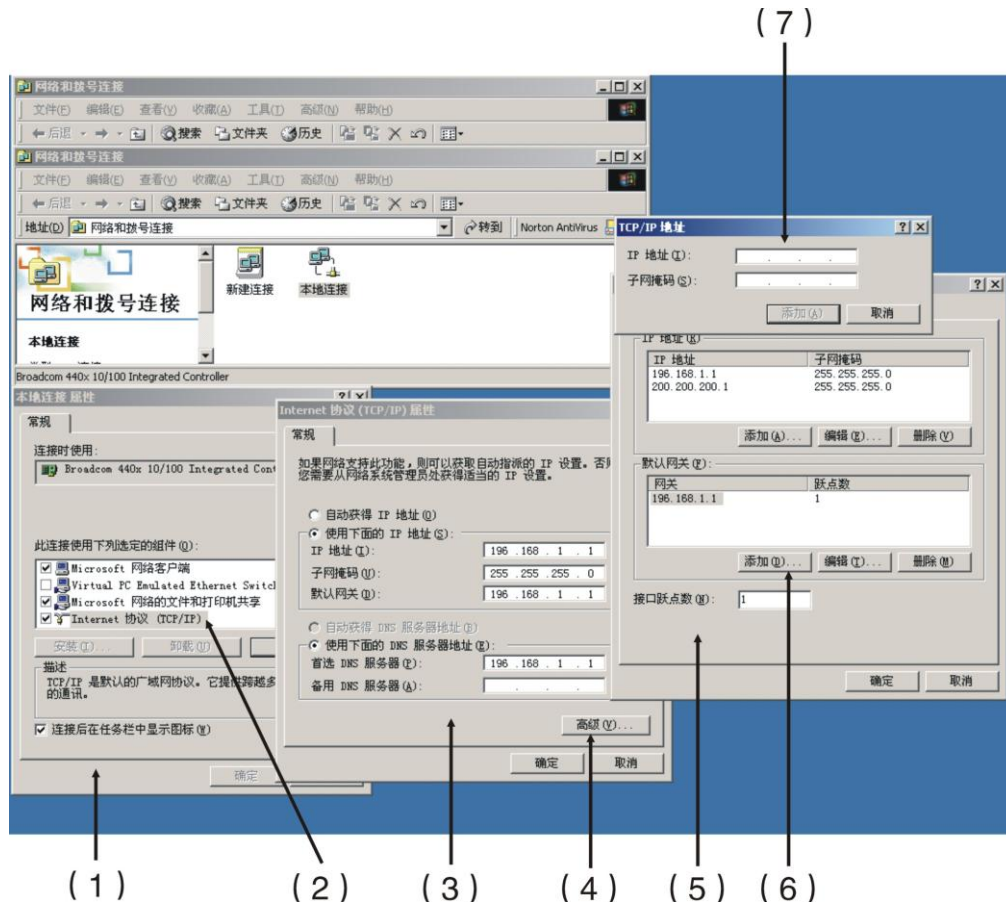
2. Communication Settings

Steps to realize direct communications between the controller and the PC:

- 1) Check whether the network cable connection between the controller and the PC.
- 2) Manually set the IP address of the PC:

Manually set the PC IP address for WINDOWS2000 or XP operation to 200.200.200.200. If there are several NICs, please check before setting which NIC is connected with the controller.

The interface for manual setting of IP addresses is shown below:



- 1) Enter the attributes window of Network Neighborhood and select the attributes interface of "Local Connection" (1).
- 2) Double click (2) Internet Protocol (TCP/IP) to enter the interface of Fig. 3, select "Use the below IP address" and then click (4) "Advanced" button to enter Fig. (5).
- 3) Click (6) "Add" button to enter the interface of Fig. (7), modify the IP address to 200.200.200.200. Its subnet mask must be the same with that of the NIC.
- 4) After the setting, press "Add" button, then always press the "Enter" button to the end.

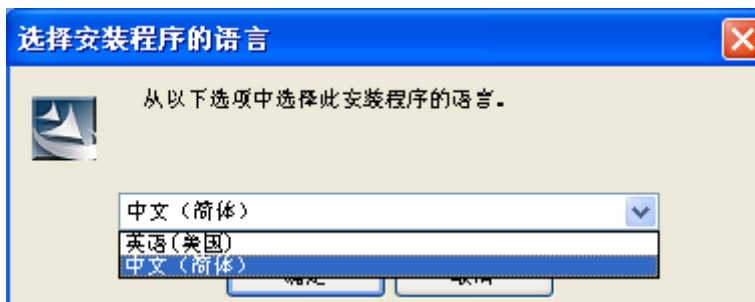
Note: after setting of the IP address, you don't need to reset the IP address for re-connection of the same PC with the controller.

3. Software Installation

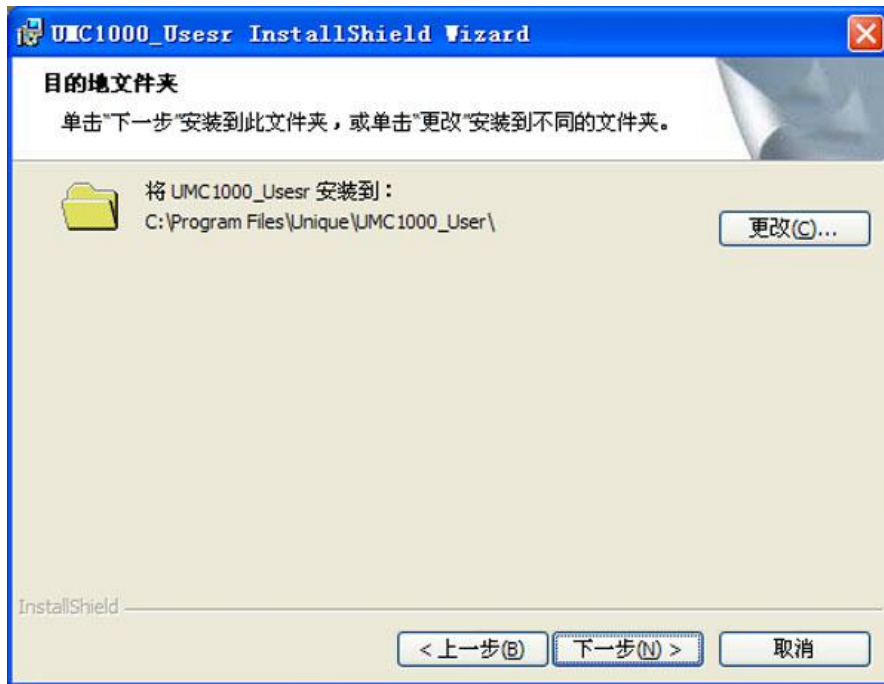
- 1) Run UMC1000_User_Install.exe to start software installation.



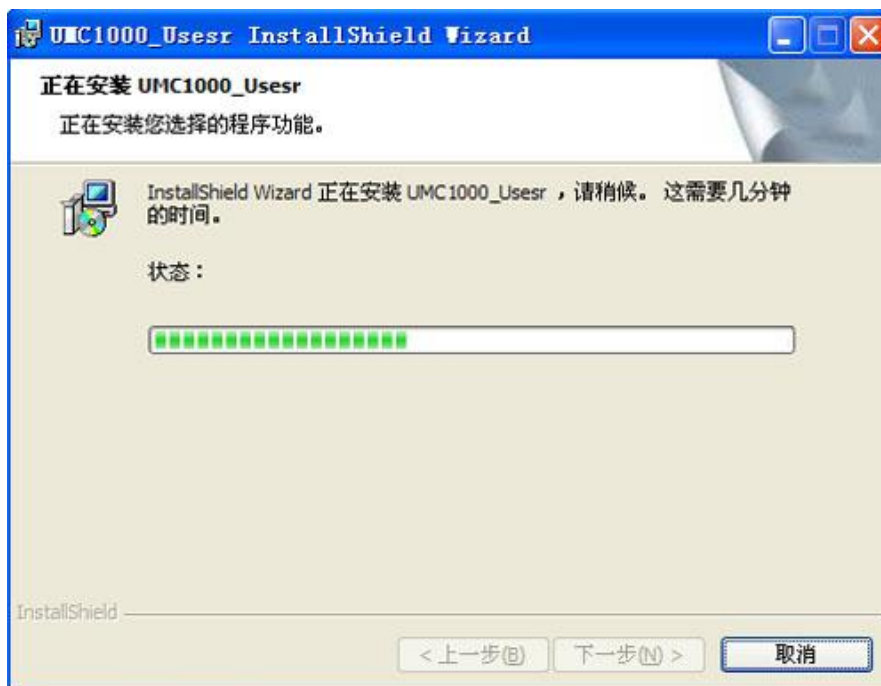
2) Select language for the installation process.



3) Specify the installation directory, use the [Change] button to enter the directory selection interface, then click [Next] to start installation.



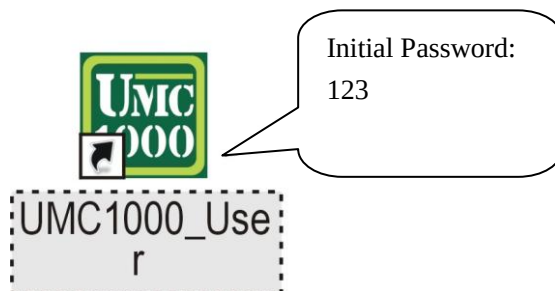
- 4) The installation may last for a few minutes. The Finish interface will show up after completion of the installation.



- 5) Select Launch UMC1000_User, then click “Finish” to exit the installation and immediately launch the UMC1000 host software.



- 6) After the installation is finished, replicate the file UMC1000_User.exe of UMC1500 version into the installation directory to overwrite the original file.
- 7) A green shortcut icon of UMC1000_User will appears on the desktop. Double click the shortcut icon to run the software.



4. Software Login



The dialog box is titled "user LOGIN" on the left side, which features a graphic of a computer monitor with a green screen and a set of keys. On the right side, there is a "UNIQUE" logo at the top. Below the logo, there is a "User name:" label followed by a dropdown menu showing "Admin" and "[管理员]". Below that is a "Password:" label followed by a text input field containing three asterisks. At the bottom, there are three buttons: "Modify", "Logon", and "Exit".

- 1) User name-> Select a user name
 Password-> Input the logon password
 Modify -> Modify the logon password
 Login -> Login the software
 Exit -> Exit the software
- 2) Modification of the login password



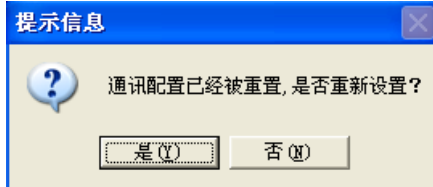
This dialog box is similar to the first one, but it is for modifying the password. It has the same "user LOGIN" title and "UNIQUE" logo. The "User name:" dropdown menu is still set to "Admin" and "[管理员]". The "Password:" field contains three asterisks. Below it, there are two more text input fields: "Input new password:" and "Confirm password:". At the bottom, there are three buttons: "Cancel", "OK", and "Exit".

- Input new password: -> Input new logon password
 Confirm password: -> Confirm the input password
 Cancel -> Cancel the password modification
 OK -> Finish the password modification

Exit -> Exit the software

5. Communication Connection

- 1) In the first run of the software, a prompt will pop up indicating that the communication configuration needs to be done. Select "Yes" to start configuration and select "No" to ignore the prompt, or click the icon of [Fig. 2] to enter the communication configuration interface.



[Fig. 1]



[Fig. 2]

- 2) The interface of Communication Configuration is as shown below. The IP address configuration must be consistent with that of the controller and the same with the numbers of the first 3 sections of the native IP. Then the connection can be conducted. At the meantime, the IP address of the controller must not be the same with the native IP.



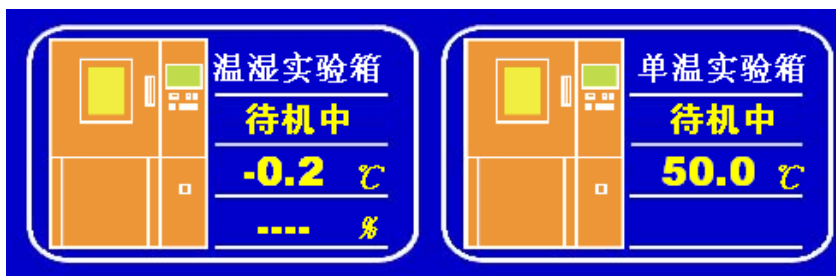
[Fig. 3]

- 3) Shortcut icon on the main interface (see below), communication connection or click the Real-time Monitor of Communication Connection on the menu bar.
Note: before communication connection, please check whether the local firewall has been shut down or set the firewall to enable the TCP protocol of any local port for external 20 ports.



[Fig. 4]

- 4) After successful connection, it will show as follows, each box presents a controller. From top to bottom, the information bar on the right side indicates: TAG name of the controller, running status, current temperature (only indicated in UMC1500). Click the TAG name to re-edit, click the yellow test chamber to enter the detailed operation interface of the controller.



[Fig. 5]

6. Use the Host Software to Export Parameter Files from the Controller

1) Please finish the operation of “Communication Connection” before this operation.



[Fig. 1]

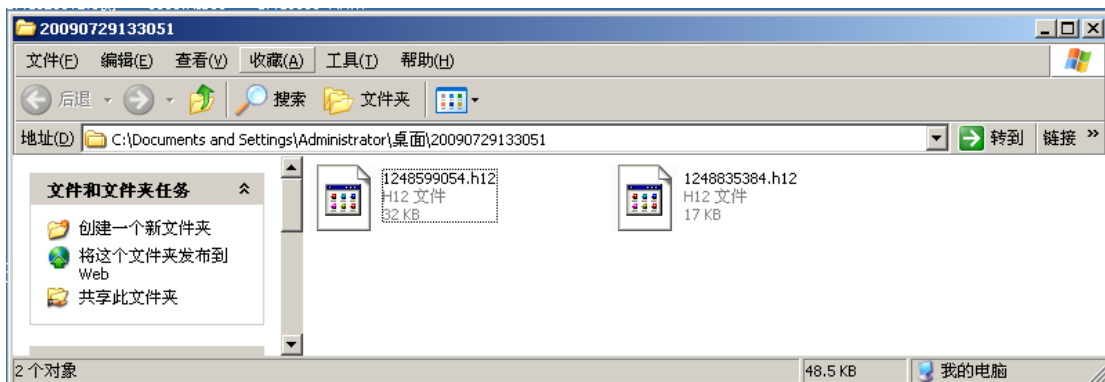
1) After entering the detailed interface, click the second icon of [Fig. 1] to open the FTP function dialog box. Please note that the controller must be under remote mode this time.



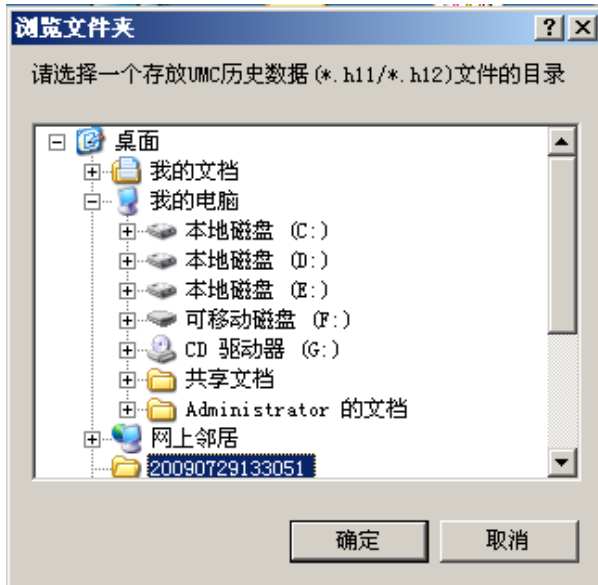
[Fig. 2]

7. Examples of History Playback

1) Export historical data file from the controller. The exported file is stored in the folder named with export time, as shown below:



2) Enter the history playback interface of the host software, select the  button, then the folder selection list will pop up. Select the exported folder and press Enter, as shown below:



- 3) After finishing the above step, if there are historical data in the folder, the dialog box of “Save the file” will pop up. Enter the name and save the file.



- 4) Click the button to open the file saved in the last step. Pop up the “History Curve Setting” window. The time shown in the window is the start time of the data saved in the file. Set the intended start time and the time interval, press Enter to play back the curve of this time section.



Similarly, you can use the button to modify the start time or time interval.

8. Use the Host Software to play back Historical Data

- 1) After running the UMC1000, select the icon shown in [Fig. 1], or select the History Curve on the menu bar to enter the history curve interface.

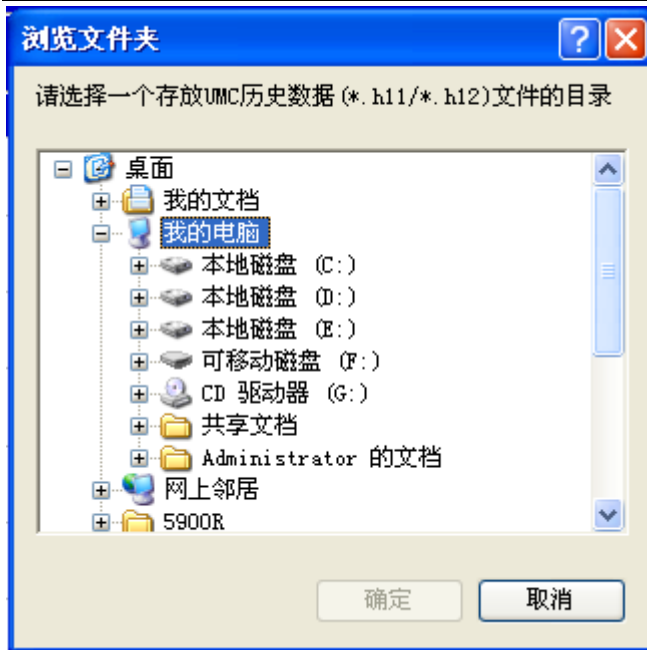


[Fig. 1]



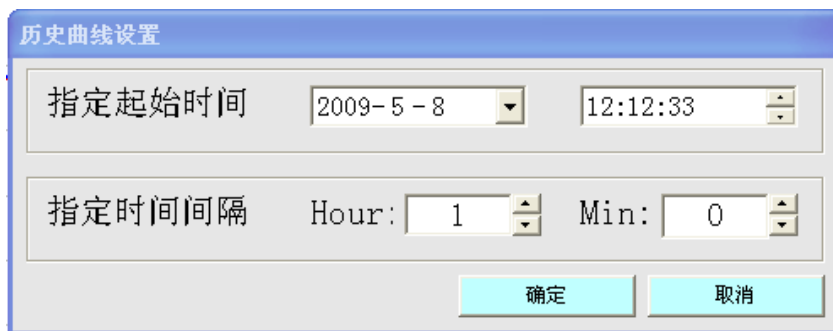
[Fig. 2]

- 2) The [Fig. 2] shows the shortcut icon of the history curve interface. If you just execute the [Use the Host Software to Upload Historical Data] or export historical data from the controller to a U disk, then click the second icon shown in [Fig. 2] to conduct data conversion.



[Fig. 3]

Select in the interface shown in [Fig. 3] the folder to store the uploaded or exported historical data. After selecting the right folder, click Enter and the dialog box to save the file will pop up. Enter the file name and select the storage path, click Save to finish the conversion operation.



[图 4]

- 3) After finishing the data conversion operation, you will get a UMC historical data file. Use the third icon shown in [Fig. 2] to open the file. Then the start time and time interval selection interface shown in [Fig. 42] will pop up. The start time shown in the interface is the start time of the currently opened historical data file. The maximum time interval is 168 hours. If you want to change the playback interval, then click the fourth icon shown in [Fig. 2] to reset. At the meantime, if you need to change the axes of the curve, you can click the sixth icon shown in [Fig. 2] to make relevant settings.
- 4) Click the fifth icon shown in [Fig. 2] to save the historical data on the current page as UMC historical data file or Microsoft Office Access database file.

9. Use the Host Software to Conduct Remote Control

- 1) Before carrying out the following operations, please make sure operation of [Communication Connection] has been finished.



[Fig 1]

- 2) After entering the details interface, click the fifth icon shown in [Fig 1] to control fixed-value running and the sixth icon to control program running.

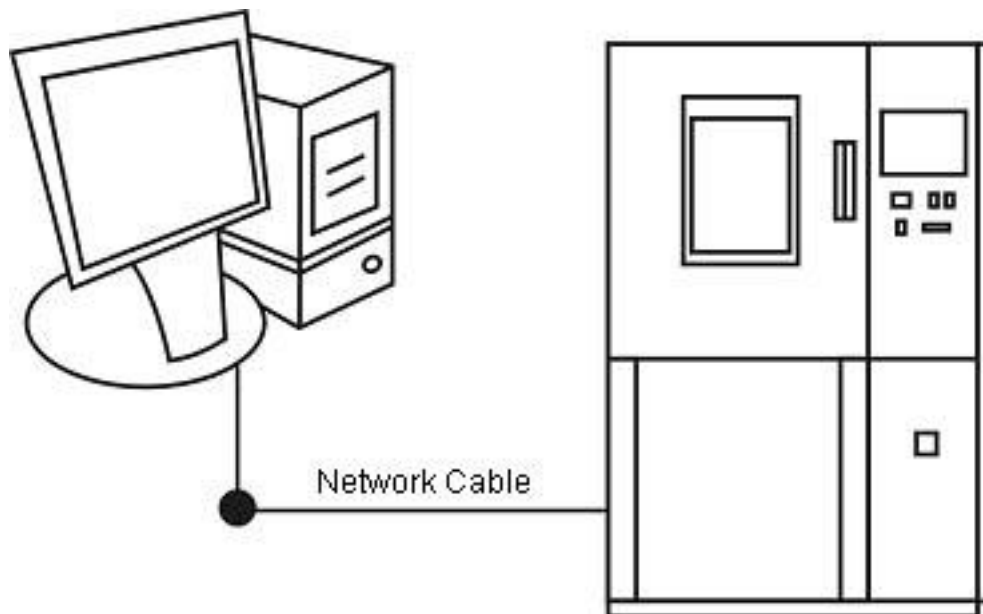
10. Description of File Types Involved in the Operation of Host Software

- a) *.d12 file: parameter file of UMC temperature and humidity controller
- b) *.d11 file: parameter file of UMC single temperature controller
- c) *.p12 file: process file of UMC temperature and humidity controller
- d) *.p11 file: process file of UMC single temperature controller
- e) *.h12 file: history file exported from UMC temperature and humidity controller
- f) *.h11 file: history file exported from UMC single temperature controller
- g) *.his12 file: historical data file exported from UMC temperature and humidity controller
- h) *.his11 file: historical data file of UMC single temperature controller
- i) *.u12 file: advanced update file of UMC temperature and humidity controller system
- j) *.u11 file: advanced update file of UMC single temperature controller system

VII. Ethernet Connection

There are three connection modes between UMC1000 controllers and the host PC, including direct connection mode, LAN mode and Internet mode.

- (1) Direct connection between the PC and 1 UMC1000 controller

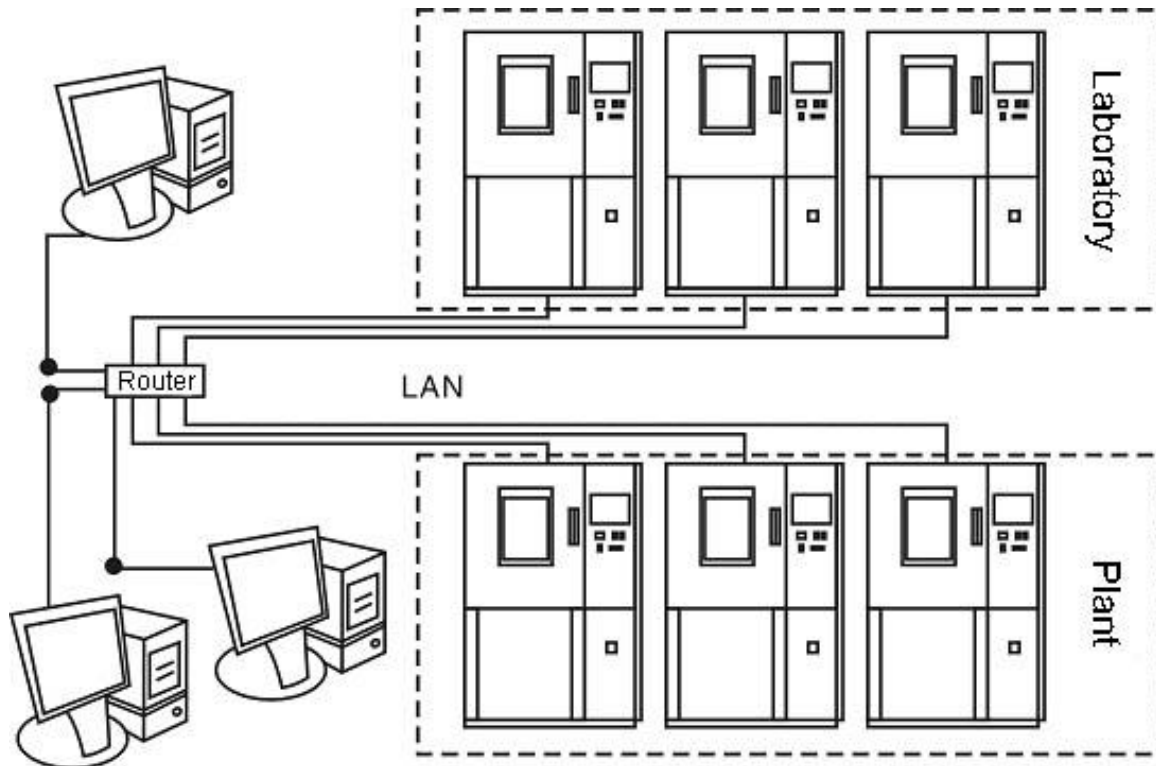


Network cable|:

To directly connect the PC with one controller, the IP addresses of the PC and the controller must be set within 1 section.

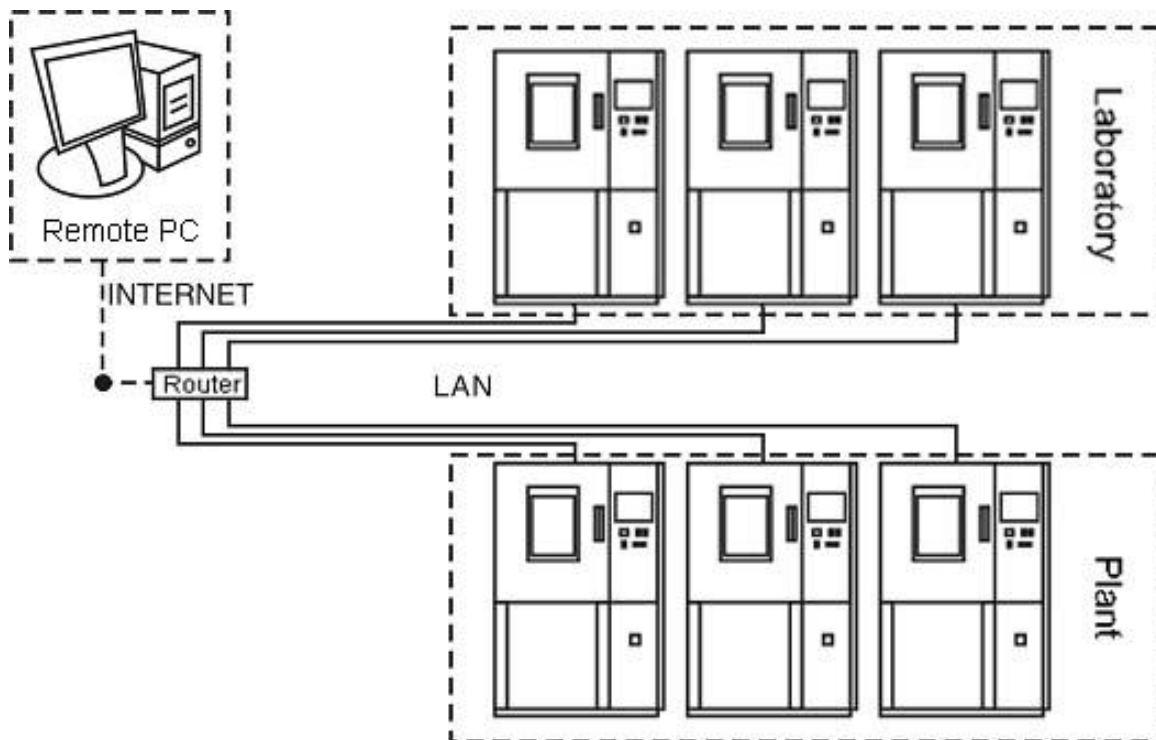
For example: if the IP address of the controller is "200.200.200.190", then the PC's IP address can be set to "200.200.200.200".

- (2) LAN connection between several PCs and several UMC1000 controllers



To connect several UMC1500 controllers with several host PCs, a switch and or router should be used to form a local area network. The IP address of UMC controllers can be automatically obtained from DHCP.

(3) WEB SERVER remote synchronization



For example: if the user's PC and controller is within the same internal network, the user needs to open the IE browser to access the logon interface to choose operation or monitor. If you choose operation, you must input the user name and password. The default user name is admin, with the default password of 123. The user name cannot be changed but the password can be changed.